IEPA Log No.: **C-0139-19**
CoE appl. #: **CEMVS-OD-F-2014-422**

Public Notice Beginning Date: **October 9, 2019**
Public Notice Ending Date: **October 24, 2019**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification for Discharge of Dredged or Fill Material

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Illinois Department of Natural Resources – 1 Natural Resources Way, Springfield, IL 62702

Discharge Location: Near Karnak in SE 1/4 of Section 7 of Township 14-South, Range 2-East of the 3rd P.M. in Pulaski and Johnson County.

Name of Receiving Water: Cache River

Project Description: Proposed hydraulic dredging of approximately 18,000 feet of the Cache River with placement within the floodplain.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge dredged or fill material into the waters of the State associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please contact Francisco J. Herrera at email francisco.herrera@illinois.gov or phone no. 217/782-3362.

FJH:C-0139-19_401 PN and FS_06Jun19.docx

Fact Sheet for Antidegradation Assessment
For Illinois Department of Natural Resources
IEPA Log No. C-0139-19
COE Log No. CEMVS-OD-F-2014-422
Contact: Angie Sutton 217/782-3362
Public Notice Start Date: October 9, 2019

Illinois Department of Natural Resources ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with side-cast dredging in the southeast quadrant of Section 7, Range 2E, Township 14S, in Pulaski and Jackson Counties, Illinois. The project site is located between Karnak Road and Cypress Ditch (river miles 33.942-28.788). Approximately 18,000 feet within the 27,000-foot project reach will be dredged to create pool and run habitats where only shallow areas are currently present. Deposition of dredge spoils will be used to restore natural stream gradient features. The purpose of the proposed activities is to restore the Cache River to provide perennial habitat to aquatic organisms and improve water quality and dissolved oxygen concentrations during low flow periods. The Applicant would employ in-channel dredging with side-cast of spoils to adjacent riparian areas using an amphibious excavator. The Applicant would place approximately 62,933 cubic yards (CY) into approximately 9.45 acres. Approximately 42 percent of the available bank length within the project reach will receive fill and efforts to maintain connectivity between stream and floodplain will be made. These deposits are expected to consolidate and vegetate quickly with little erosion when compared to previous dredging deposits near the project area. Most of the project area lies within the Cache River State Natural Area, which is owned and managed by the Illinois Department of Natural Resources.

Information used in this review was obtained from the application documents dated August 25, 2019, June 6, 2019, and April 12, 2019.

Identification and Characterization of the Affected Water Body.

The Cache River has 0 cfs of flow during critical 7Q10 low-flow conditions and is classified as General Use Water. The Cache River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System* and is given a "D" integrity rating in that document. There are two waterbody segments named within the project area. Waterbody Segment IL_ADY-01 is listed on the draft 2016 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use with potential causes given as alteration in stream side or littoral vegetative cover, changes in stream depth or velocity patterns, dissolved oxygen, manganese, and other flow regime alterations. Waterbody Segment IL_IX-05 is listed on the draft 2016 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use with potential causes given as changes in stream depth and velocity patterns, dissolved oxygen, other flow regime alterations and sedimentation/siltation. It is fully supporting for aesthetic quality. The 9.45 acres of wetland proposed to be filled with dredged spoils has been classified as forested or emergent wetlands as referenced on the National Wetland Inventory map (Figure B1) included as part of the 401 Water Quality Certification Application dated June 6, 2019.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur from this project include some increases in total suspended solids. These increases are a normal and unavoidable result of mechanical side-cast

dredging. Water may flow back into the channel during spoil placement, but because work will be done during low flow period, increases are expected to be local and temporary. Spoils will be deposited in the adjacent riparian corridor due to inaccessibility to much of the project reach. This will also limit potential damage to the floodplain and vegetation.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in total suspended solids would be local and temporary. Although the existing benthic habitat would be permanently removed by the dredging activities, it is anticipated to recover and improve over time due to the increase in pool and run habitat depths. These improvements to depth and velocity will also lead to improvements in dissolved oxygen levels. Spoil deposits are expected to consolidate and support vegetation very quickly which will help to stabilize the deposits. Erosion controls will be observed in the form of project procedures by dredging during low flow conditions. It should be noted that although some spoils will flow back into the channel during placement, turbidity will be localized and is expected to settle quickly. Best Management Practices indicate that storm water will be managed by utilizing tapered placement of dredge spoils with 10-foot gaps between 40-foot segments of spoils, while avoiding vegetation. This will allow water movement between the waterbody and floodplain without altering flood storage capacity, scour dynamics and channel velocity. This result is expected, as the same result has been achieved in similarly placed, decades-old dredge spoil placements near the project area. As part of the overall restoration beaver dams, sediment bars and large log jams will be removed.

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed project will improve the depth, velocity and in turn dissolved oxygen within the stream. This would be beneficial to the stream by restoring habitat for aquatic plant and animal life that has been previously lost to excessive sedimentation. Placement of dredging spoils would also be of benefit by helping to reestablish some natural features of the wetland habitats in the adjacent areas. This area of the Cache River is used for recreation in the form of boating and fishing. Currently, canoes and kayaks are unable to float through many areas of the stream during low flow periods. This project would help to enhance recreational activities with the improvement in water depth. The purpose of the Lower Cache River Land and Water Reserve is to preserve the existing aquatic natural communities. The proposed project will allow for that goal to be met.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

The Applicant has provided the following alternatives:

<u>Option 1 – Preferred Action:</u>
The preferred action is to use an amphibious excavator to mechanically dredge the Cache River, removing approximately 62,933 CY of sediment from the channel and depositing it in the adjacent riparian area. This will allow for restoring of the wetland in the floodplain over time as

the sediment will eventually consolidate and revegetate. This option results in improvements in channel depth and velocity with the creation of runs and pools, and in turn restores and enhances aquatic habitat. It will also provide improved recreational function by allowing canoes and kayaks to pass through the channel more easily. The purpose of the Lower Cache River Land and Water Reserve is to preserve the existing aquatic natural communities and because this project lies within the reserve, this action will allow that goal to be met. This alternative will result in pollutant loading increases, but low dissolved oxygen and sedimentation impairments will be improved.

Option 2 – No Action:
This option results in leaving the currently degrading channel in its existing state. This option would allow for the channel filling and aquatic habitat degradation to continue. The purpose of the Lower Cache River Land and Water Reserve is to preserve the existing aquatic natural communities and because this project lies within the reserve, a no action alternative will not allow that goal to be met. This alternative will provide for elimination of pollutant loading increases, but low dissolved oxygen and sedimentation impairments will continue.

Option 3 – Side-Cast Dredging With Removal of Dredge Spoil:
This option would allow for removal of dredge spoils by hauling from the project area and depositing in a recipient location. Because there are only a few areas that trucks could access the project area, the excavator would carry dredge materials to the access points, limiting dredging work to a smaller area around each access. In turn, dredging would be much less than proposed. Although this option limits pollutant loading to those access point areas, low dissolved oxygen and sediment impairments will continue, thus limiting the ecological benefits in comparison to the Preferred Action.

Option 4 – Hydraulic Dredging:
A hydraulic dredge could be navigated from the upstream project reach to downstream. The dredge distance would be limited by the length of pipe used to carry spoils thus limiting dredging to a fraction of the Preferred Action. There have also been no containment areas for receipt of spoils identified. Although this option limits pollutant loading to those access point areas, low dissolved oxygen and sediment impairments will continue, thus limiting the ecological benefits in comparison to the Preferred Action.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

An EcoCAT endangered species consultation submitted on April 12, 2019 to the Illinois Department of Natural Resources resulted in a consultation termination provided the following recommendations are taken to ensure the protection of resources in the proposed work areas:

- All equipment must be power washed off-site to remove invasive plant seeds or propagules;

- an IDNR biologist must approve all routes of access to and from the channel by heavy equipment;
- the entirety of the project area contains imperiled species, listed trees and shrubs will be delineated to avoid damage by side-cast sediment;
- and side-cast materials should not impact listed plants, animals or animal hibernacula.

The project was also reviewed for cultural resource impacts and was determined to be in compliance with the Illinois State Agency Historic Resources Preservation Act, with the condition that there be no staging of equipment on the indicated cultural site.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this assessment was written. We tentatively find that the proposed activity would result in the attainment of water quality standards; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity would benefit the Cache River and associated area by improving the dissolved oxygen, and in turn improving aquatic habitat in the channel as a result of increasing channel depth and velocity, improving erosion with the deposit of spoils to the adjacent wetlands and enhancing recreational use by boaters and anglers. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.